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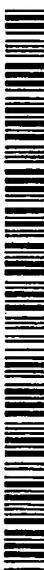
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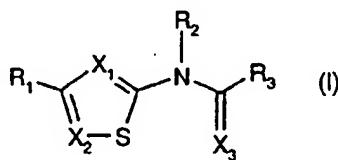
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(54) Title: AMINOHETEROCYCLYLAMIDES AS PESTICIDES AND ANTIPARASITIC AGENTS



(57) Abstract: The invention relates to compounds of formula (I) in which R₁, R₂, R₃, X₁, X₂ and X₃ are as defined in claim 1, and to any enantiomers thereof. The active substances have advantageous pesticidal properties. They are particularly suitable for controlling pests in domestic and useful animals.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 00/12064

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07D417/12 C07D409/12 A01N43/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C07D A01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BEILSTEIN Data, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	GB 2 331 748 A (ZENECA LTD) 2 June 1999 (1999-06-02) Claims 1-5; pages 4-9: compounds 12,18,53,145,147,178; page 16, lines 13-16 (process); page 17, lines 1-20 (use). ---	1-7
X, Y	EP 0 623 282 A (SHELL INT RESEARCH) 9 November 1994 (1994-11-09) Abstract; claims 1 (use of isothiazoles) and 11 (process for preparing isothiazoles); page 7: isothiazoles 24,25; page 1, line 45-46 (activity). ---	1-7
X	FR 2 014 527 A (MERCK AG E) 17 April 1970 (1970-04-17) Claims 3 (isothiazoles III), 4 (3-C1-4-CN-5-furane-2-carbonylamino-isothi- azole), 5 and 6 (antiparasitic agents). ---	1,3-7
-/-		

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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- "&" document member of the same patent family

Date of the actual completion of the international search

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International Application No

PL/EP 00/12064

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 24 34 922 A (FMC CORP) 30 January 1975 (1975-01-30) Claim 1 (isothiazolylureas); pages 22-23; compounds 29-32. -----	1
P,X	DATABASE WPI Section Ch, Week 200063 Derwent Publications Ltd., London, GB; Class C02, AN 2000-649612 XP002167395 & JP 2000 226389 A (MITSUBISHI CHEM CORP), 15 August 2000 (2000-08-15) Abstract; examples. -----	1-7

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 00/12064

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
Although claim 5 comprises a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1 - 7 (all part)

Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-7 (all part)

1,2,4-Thiadiazoles and 1,2-thiazoles (I) wherein X1 is N or C(CN) and X2 is N, a process for preparing such compounds (I), a composition comprising such compound (I), the use of such compound (I), and the corresponding method for controlling pests.

2. Claims: 1-7 (all part)

1,3-Thiazoles (I) wherein X1 is N and X2 is C(CN), C(COOR6), C(SOR6), C(CONR7R8) or C(N02), a process for preparing such compounds (I), a composition comprising such compound (I), the use of such compound (I), and the corresponding method for controlling pests.

3. Claims: 1-7 (all part)

Thiophenes (I) wherein X1 is C(CN) and X2 is C(CN), C(COOR6), C(SOR6), C(CONR7R8) or C(N02), a process for preparing such compounds (I), a composition comprising such compound (I), the use of such compound (I), and the corresponding method for controlling pests.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 00/12064

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2331748	A 02-06-1999	NONE	
EP 0623282	A 09-11-1994	AU 677640 B AU 6185794 A BR 9401868 A CA 2122794 A CN 1095376 A HU 66845 A JP 7002604 A TR 27765 A ZA 9403027 A	01-05-1997 10-11-1994 06-12-1994 06-11-1994 23-11-1994 30-01-1995 06-01-1995 04-08-1995 30-01-1995
FR 2014527	A 17-04-1970	DE 1770819 A DE 1924830 A AT 287707 B BE 735655 A CH 547819 A DK 124207 B ES 369148 A GB 1226913 A IL 32487 A NL 6910070 A SE 359300 B	13-01-1972 19-11-1970 10-02-1971 05-01-1970 11-04-1974 25-09-1972 16-06-1971 31-03-1971 16-05-1974 08-01-1970 27-08-1973
DE 2434922	A 30-01-1975	AT 336944 B AT 588374 A AU 7103974 A BE 817903 A DK 387374 A EG 11086 A ES 428446 A ES 448389 A ES 448390 A FR 2237893 A IN 140035 A IT 1048182 B JP 50031043 A LU 70547 A NL 7409735 A PH 10517 A SU 551020 A TR 18387 A ZA 7404583 A CS 185250 B TR 18388 A	10-06-1977 15-09-1976 15-01-1976 20-01-1975 10-03-1975 30-11-1976 16-12-1976 01-08-1977 01-08-1977 14-02-1975 04-09-1976 20-11-1980 27-03-1975 27-03-1975 21-01-1975 26-05-1977 25-03-1977 12-01-1977 30-07-1975 15-09-1978 12-01-1977
JP 2000226389	A 15-08-2000	NONE	
JP 18145	A	NONE	